Due: Wednesday, November 1st

HMC   Math 142   Fall 2017
Prof. Gu
Problem Set 7

Start this assignment as soon as possible!

Read:

- Baby Do Carmo, Differential Geometry of Curves and Surfaces: Sections 3-2, 3-3 of Chapter 3.

- Review handouts 11, 12 and 13.

- Lecture Notes.

Do:

A: Problems on Reviewing of Self-Adjoint Linear Maps.

- a) Write up a proof for the Key Theorem on page 216, Baby Do Carmo.

B: Problems for understanding course materials

- a) Carry out the details for Example 5, page 162, Baby Do Carmo. (Including the application to a geometric interpretation of the Dupin indicatrix, that is from page 164 to 165, Baby Do Carmo.)

C: Other Problems (Choose 2 from the following 4 problems)

- a) Problem 2 on page 151, Section 3-2, Baby Do Carmo.

- b) Problem 6 on page 151, Section 3-2, Baby Do Carmo.

- c) Problem 8 on page 151, Section 3-2, Baby Do Carmo.

- d) Problem 17 on page 152, Section 3-2, Baby Do Carmo.